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ABSTRACT

The problem of this research design was to determine the effect of the degree of bilingualism upon creative acts in 10th grade high school students who are Anglo-oriented as compared with bilinguals who are non Anglo-oriented. A total 600 bilingual students, 300 from each of two high schools in Laredo School District (Spanish usage reinforced) and Corpus Christi (Spanish usage discouraged) were administered the Torrance Creativity Tests (TCT) and the Hoffman Bilingual Scale (HBS). The 87 students from Laredo who scored the highest on the HBS and the 87 who scored the lowest on the HBS from Corpus Christi were analyzed. Results indicate: (1) bilingual students from Anglo oriented homes were no more original, on a figural originality test, than those from non Anglo oriented homes, (2) those from Anglo oriented homes were more elaborate on a figure elaboration test than those from non Anglo oriented homes, (3) there was no significant relationship between Laredo students (non-Anglo-oriented) intelligence score and performance on the creativity test. In general, the Anglo oriented bilingual student reflects a greater ability to carry out or embellish creative ideas than the non Anglo oriented student. (Author/KJ)

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A STUDY OF BILINGUALISM AND CREATIVITY

Final Report

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A STUDY OF BILINGUALISM AND CREATIVITY

INTRODUCTION

The disadvantages which accompany the bilingual Mexican-American child has been the subject of numerous research studies the past three decades. Darcy (1953) noted that bilingualism depresses performance on the highly verbal intelligence test. Whether this performance of the bilingual is a bias of tests, a result of socio-economic deprivation, or a genuine deficit in the manipulation of abstract symbols resulting from a language conflict, is not answered.

Jansen (1962a) has reviewed the evidence of bilingualism and concluded that it does adversely affect speech, vocabulary, originality, verbal intelligence and school achievement. In a later review, Jansen (1962b) suggested that bilingualism is an asset and pointed out that its apparent damaging effects have been a function of our inadequate research tools and design. Despite the conflict in research results and the uncertainty in methodology, it is apparent that Mexican-American children enter school with language disabilities that require instructional modifications. The direction these modifications should take, however, is in dispute.

Teachers and guidance counselors directly concerned with bilinguals seek to discover the answer to the following two questions:

1. Does a bilingual child have any special problems and if so, how can the elementary school teacher and others best solve them?

2. Do the advantages of bilingualism outweigh the disadvantages?

The early research of Hoffman (1934) indicates that bilingualism is not an all or nothing, unitary trait. Bilingualism varies in degree depending on the use of the second language in the home and community of

the child. Norman and Mead (1960) have demonstrated that the degree of bilingualism (as measured by the Hoffman Bilingual Schedule) is directly related to performance on an instrument which assesses verbal ability.

Since bilingualism causes a depressed performance on measures of language ability or achievement in English, it is conjectured that the depressing effect is created by the intensity of pressure to use a second language in the pupil's environment. (May, 1966) What effect, then does this have on the creative potential of the bilingual child?

Jacobs and Pierce, (1966) using Guilford's "Uses" and "Word Meaning" tests, found that bilingual students of Greek, Spanish American, and Czechoslovakian descent in Florida were higher on non-verbal creative skills than were the monolinguals. The monolinguals were slightly higher on the verbally oriented "Word Meanings" test. The combined score, using both tests, showed the bilingual scoring considerably higher.

The problem of this research design is to determine the effect of the degree of bilingualism upon creative acts in tenth grade high school bilingual students who are Anglo-oriented as compared with bilinguals who are non-Anglo-oriented.

METHODS

At the tenth grade level, a total of 300 bilingual students from the Laredo Independent School District and 300 bilingual students from the Foy Moody High School, Corpus Christi were administered the Torrance Creativity Tests, Form A and B Figural and the Hoffman Bilingual Scale.

Torrance's Tests of Creativity were selected since they were highly non-verbal and removed a verbal variable which could distort the results.

The children from Laredo live in a community which reinforces the use of Spanish rather than English. The Mexican American students in Corpus Christi live in a community which discourages the use of Spanish. The degree of family support for the use of Spanish was assessed by administering the Hoffman Bilingual Scale to each student.

The results of the Hoffman Bilingual Schedule indicated whether verbal and non-verbal creativity was influenced by the degree of family pressure for bilingualism as well as community pressure.

Since it is assumed that the Corpus Christi population will be low on the Hoffman Scale and the Laredo population high, the creativity tests will then be compared by use of an Analysis of Covariance with typical control on intelligence. Intelligence scores were available from the cumulative records.

The 87 students from Laredo who scored highest on the Hoffman Bilingual Scale and the 87 students from Corpus Christi who scored lowest on the Hoffman Scale were selected out for analyzing.

Specific hypotheses were:

1. There is no significant difference in scores achieved on Torrance Tests of Creativity - Figural Originality, of students who are high on the Hoffman Bilingual Scale and a like group that is low.
2. There is no significant differences in scores achieved on Torrance Tests of Creativity-Figural Elaboration, of students who are high on the Hoffman Bilingual Scale and a like group that is low.
3. There is no significant correlation of I.Q. scores and creativity scores, or of the performance of the student on each test.

RESULTS

The scores of 87 bilingual students from Corpus Christi who scored lowest on the Hoffman Bilingual Scale and 87 bilingual students from Laredo, Texas who scored highest on the Hoffman Bilingual Test were compared with the scores obtained from the Torrance Tests of Creativity Form A & B (Figural). The data were analyzed by an Analysis of Covariance with scores from a common I.Q. test being the covariate. The results are presented in Table I.

TABLE I

Comparative Creativity Scores of Bilingual Students From Laredo and Corpus Christi on the Torrance Tests of Creativity (Figural)

Test	Mean	df	F	Significance
Elaboration (A & B)	Laredo - 106.93 Corpus Christi - 137.73	45	101.10	< .01
Originality A & B	Laredo - 23.89 Corpus Christi - 24.44	45	0.248	> .01

The results, as analyzed by the F test, indicate that the null hypothesis that bilinguals from homes that are Anglo-oriented are no more creative verbally than bilinguals who are from homes which are non-Anglo-oriented, cannot be rejected.

This seems to indicate that both groups function about equally in producing ideas which are away from the obvious or original.

The bilingual students from Corpus Christi did significantly better ($< .01$) on Figural Elaboration than did the group from Laredo. The figural elaboration test reflects the subjects' ability to develop, embellish, and carry out otherwise elaborate ideas. High scores seem, among other things, to be associated with keenness or sensitivity in observation.

The correlation of each group was computed between intelligence scores and the Creativity tests of Figural Originality and flexibility. Correlation coefficients were also secured for each school to see the relationship that exists between the scores of the two creativity tests, Figural Elaboration and Figural Originality. The correlational results of intelligence scores and creativity scores are presented in Table II.

TABLE II

Relationship of Creativity Scores and Intelligence Scores

Test		N	r	t	Significance
Laredo	Figural Elaboration	45	.068	.463	NS
	Figural Originality	45	-.170	1.14	NS
Corpus Christi	Figural Elaboration	45	.4304	3.13	$< .01$
	Figural Originality	45	.4165	2.96	$< .01$

The results seem to indicate a significant relationship between the creativity scores and the intelligence of the bilingual student from Corpus Christi; whereas, little relationship, or even a tendency toward a negative relationship, exists between the creativity scores and intelligence of the student from Laredo.

The correlation results between the figural originality and figural elaboration scores of each school is presented in Table III.

TABLE III

Relationship of Torrance's Figural Originality Test and Figural Elaboration Test by Corpus Christi and Laredo Students

School	N	r	t	Significance
Laredo	45	.613	5.07	< .01
Corpus Christi	45	.691	6.29	< .01

The results indicate that a significant relationship exists between the tests. Students who do well on one test have a tendency to do well on the other test as well as those who do poorly on one test have a tendency to do poorly on the other test.

CONCLUSION AND RECOMMENDATION

The purpose of this study was to determine the effect of the degree of bilingualism upon creative acts in tenth grade bilingual students who were Anglo-oriented as compared with bilinguals who were non-Anglo-oriented. The results of the study seem to justify the following listed conclusions.

1. Bilingual students from Anglo-oriented homes in Corpus Christi were no more original, on a figural originality test, than were a group of bilingual students from non-Anglo-oriented homes in Laredo, Texas.

2. Bilingual students from Anglo-oriented homes were significantly ($< .01$) more elaborative on a figural elaboration test than were a like group of bilingual students from non-Anglo-oriented homes in Laredo, Texas.

3. There was no significant relationship between the Laredo students' intelligence score and his performance on the tests of creativity.

4. There was a significant relationship between the Corpus Christi students' intelligence score and on his performance on the tests of creativity. The higher or lower the intelligence score, the higher or lower was the creative production.

5. There was a significant relationship between the results achieved in the Figural Originality and Figural Elaboration tests. The student that was high on one was high on the other, or conversely low on one and low on the other.

The results seem to permit us to say that the Corpus Christi bilingual student from the Anglo culture reflects a greater ability to carry out or embellish creative ideas than the Laredo student from the non-Anglo culture. There seems to be little difference in the ability to foster creative ideas.

Recommendation:

1. It would be interesting to see what effect the bilingual's view of himself has upon creative production. It is possible that the higher the self concept, the higher the creativity of the student.

2. A replicative study would be useful separating and analyzing the scores according to sex. Is the female bilingual student more creative than the male?

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